

REMARKS

Claims 1-22 are pending. By this Amendment, claims 1 and 2 are amended. Claims 14-22 are withdrawn from consideration. The attached Appendix includes a marked-up copy of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

EP 0363724 submitted as part of an Information Disclosure Statement filed on July 2, 2002, was not initialed on the Form PTO-1449 to indicate the reference was considered in the copy returned to Applicant's representative. Through a telephone conference on September 17, 2002, with Examiner Cuevas, it was learned that the reference was lost within the Patent Office. Therefore, a copy of EP 0363724 is attached as is a copy of the Form PTO-1449 and the date-stamped receipt showing filing of the reference.

Applicant notes that the allowability of claims 2, 4 and 5 is withdrawn in view of a new reference. Applicant submits that claims 2, 4 and 5 are allowable for at least the reasons discussed below.

Claims 1-5 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 4,471,288 to Morishita et al. in view of U.S. Patent No. 5,213,522 to Kojima. The rejection is respectfully traversed.

Applicant submits that neither Morishita or Kojima, whether considered singularly or in combination, disclose or suggest a control device for a vehicular AC generator, comprising a field current switching circuit unit having a switching transistor for performing switching control of current conducted to a field coil ... and a magnetic body mounted to the internal electric source line or the battery voltage-supplying terminal, wherein the battery voltage supplying terminal and the magnetic body are fixed to the casing, and the internal electric source line or the battery voltage line supplying terminal is equipped with only the magnetic body.

Rather, Morishita merely discloses an apparatus for controlling a charging generator having a switch device and a diagnostic device for detecting and indicating malfunctions or failures of the charging generator (col. 1, lines 6-11). Thus, the Morishita device is intended to provide a charging generator control apparatus that is capable of detecting and indicating various malfunctions, such as no power generation, uncontrolled output voltage, and the disconnection of a rectifier output terminal (col. 2, lines 35-39). To control the various malfunctions, a voltage regulator 3 having a surge absorber diode 301 is connected across a field coil 102. Accordingly, Applicant submits that Morishita does not disclose or suggest a field current switching circuit unit as recited in the claims, but rather discloses a voltage regulator 3.

In addition to the aforementioned deficiencies, the Office Action admits that Morishita fails to disclose a casing containing at least one IC or the switching transistor circuit unit which is mold-sealed by resin, and a magnetic body mounted to the internal electric source line or the battery voltage-supplying terminal and wherein the battery voltage terminal and the magnetic body are fixed to the casing.

To overcome the admitted deficiencies, the Office Action combines Kojima with Morishita and alleges that it would have been obvious to one skilled in the art at the time the invention was made to use the casing and magnetic body disclosed in Kojima on the device disclosed in Morishita.

However, Morishita discloses a diagnostic device 8 to detect the absence of power generation by the charging generator 1 by establishing a second preset voltage (col. 3, lines 30-37). Thus, Morishita does not disclose or suggest a switching transistor control circuit unit for performing intermittent control of the switching transistor. As such, even if Kojima disclosed a casing as alleged in the Office Action, Kojima does not overcome the deficiency of the switching transistor control circuit unit, as recited in the claims.

Furthermore, Morishita does not disclose or suggest an internal electric source unit that uses electricity supplied from a battery to form an internal electric source voltage, the internal electric source voltage supplied to the switching transistor control circuit unit.

Rather, Morishita discloses a switch device 7' having a transistor 701' having a collector connected to the cathode of the diode 708, an emitter connected to the anode of the diode 702, and a base connected to the anode of the diode 706, the resistors 703, 704 and the capacitor 705. Thus, in the Morishita device, "malfunctions such as the absence of power generation, an uncontrolled voltage adjustment, and the disconnection of the first rectifier output terminal 201 . . . can be detected to turn on the charging indicator lamp 6." For example, when no power is generated, due to the disconnection of the exciting circuit, the switch device 7 is turned off and such a failure can be detected by a voltage at the second rectifier output terminal 202 above the fourth preset value and below the second preset value (col. 5, lines 20-38). Accordingly, the Morishita device does not disclose an internal electric source circuit unit that uses electricity from a battery to form an internal electric source voltage, the internal electric source voltage supplied to the switching transistor control circuit unit.

Finally, neither Morishita or Kojima disclose or suggest a magnetic body mounted to internal electric source line or the battery voltage supplying terminal as recited in the claims. Thus, Applicant respectfully requests the rejection of claims 1-5 under 35 U.S.C. §103(a) be withdrawn.

The Office Action rejects claims 6-13 under 35 U.S.C. §103(a) as unpatentable over Morishita in view of Kojima and further in view of common knowledge. The rejection is respectfully traversed.

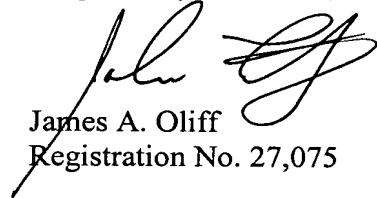
Applicant asserts that claims 6-13 are allowable for at least the reasons discussed above, as well as for the additional features recited therein.

Further, as neither Kojima or Morishita disclose or suggest a magnetic body mounted to an electric source line or terminal, the applied references cannot disclose the magnetic body disposed closer to the internal electric source circuit unit than a connection between the battery voltage supplying terminal, as recited in claim 6, or the magnetic body embedded in a connector portion of a resin provided integrally on the casing of a resin, as recited in claim 7. Furthermore, as neither of the applied references disclose the magnetic body, the references cannot disclose the additional features of the magnetic body recited in remaining claims 8-13.

In view of the foregoing, reconsideration of the application is requested. It is submitted that the claims as presented herein patentably distinguish over the applied references and fully meets the requirements of 35 U.S.C. §112. Accordingly, allowance of claims 1-13 and rejoinder of withdrawn claims 14-22 is respectfully solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, she is requested to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Appendix
Date-stamped receipt
Form PTO-1449
EP 0 363 724

Date: November 14, 2002

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DEPOSIT ACCOUNT USE
AUTHORIZATION
Please grant any extension
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APPENDIX

Changes to Claims:

The following is a marked-up version of the amended claims:

1. (Amended) A control device for a vehicular AC generator, comprising:

a field current switching circuit unit having a switching transistor for performing switching control of current conducted to a field coil;
a switching transistor control circuit unit for performing intermittent control of the switching transistor based on a battery voltage and a predetermined target voltage; an internal electric source circuit unit that uses electricity supplied from a battery to form an internal electric source voltage, the internal electric source voltage supplied to the switching transistor control circuit unit;

a casing containing at least one IC or the switching transistor control circuit unit that is mold-sealed by resin;

a battery voltage supplying terminal that supplies electricity to the internal electric source circuit unit from the battery via an internal electric source line; and

a magnetic body mounted to the internal electric source line or the battery voltage supplying terminal; and

—wherein the battery voltage supplying terminal and the magnetic body are fixed to the casing, and

—the internal electric source line or the battery voltage supplying terminal is equipped with only the magnetic body.

2. (Amended) A control device for a vehicular AC generator, comprising:

a field current switching circuit unit having a switching transistor that performs switching control of current conducted to a field coil;

a switching transistor control circuit unit that performs intermittent control of the switching transistor based on a battery voltage and a predetermined target voltage;

an internal electric source circuit unit that uses electricity supplied from the battery to form an internal electric source voltage, said internal electric source voltage being applied to the switching transistor control circuit unit;

a casing containing at least one IC or the switching transistor control circuit unit that is mold-sealed by resin;

a battery voltage supplying terminal for supplying electricity to the internal electric source circuit unit from the battery via an internal electric source line; and

an inductance element connected in series to the internal electric source line;
and

—————wherein the battery voltage supplying terminal and the inductance element are fixed to the casing, and the internal electric source line is equipped with only the inductance element.